1   WHAT IS CLAIMED IS:

1   1.   A method of automatic statistics generation and management, comprising:

2   receiving input data of a sporting event;

3   generating semantic information and geometric model information based on

4   the input data; and

5   generating sporting statistics based on at least one of the semantic information

6   and the geometric information.

1   2.   The method according to claim 1, further including storing the sporting statistics.

1   3.   The method according to claim 1, further including analyzing the sporting

2   statistics.

1   4.   The method according to claim 1, further including providing the input data from

2   at least one video camera located at the sporting event.

1   5.   The method according to claim 1, further including receiving a query for the

2   sporting statistics.

1   6.   The method according to claim 1, further including:

2   processing the input data to generate tracking information; and

3   processing the tracking information to generate the semantic information and

4   the geometric information.

1   7.   The method according to claim 1, further including analyzing the sporting

2   statistics to discover patterns and predict future trends.

1   8.   The method according to claim 1, wherein the input data is video.

1   9.   The method according to claim 1, wherein the input data is from a radio

2   frequency (RF) beacon.

1   10.   The method according to claim 1, wherein the input data is textual information.

1   11.   An automatic statistics generation and management system, comprising:

2   a head-end system to receive input data of a sporting event and to generate

3   semantic information and geometric information;

4   a statistics generation system to generate sporting statistics based on at least one

5   of the semantic information and the geometric information received from the head-end

6   system; and

7   a statistics management system to store and manage the sporting statistics

8   received from the statistics generation system.

1   12.   The system according to claim 11, further including at least one video camera,

2   located at the sporting event, to provide the input data to the head-end system.

1   13.   The system according to claim 11, further including a gateway connected to the

2   statistics management system to support query applications from a user interface.

1   14.   The system according to claim 11, wherein the head-end system includes:

2   a tracking system to receive and process the input data to generate tracking

3   information; and

4   a production system to receive and process the tracking information to generate

5   the semantic information and the geometric information.

1   15.   The system according to claim 11, wherein the statistics generation system

2   includes:

3   a model manager to access the semantic information and the geometric

4   information; and

5   a statistics generator to receive and process at least one of the semantic and

6   geometric information from the model manager to generate the sporting statistics.

1   16.   The system according to claim 11, wherein the statistics management system

2   includes:

3   a statistics database to store and manage the sporting statistics; and

4   a data miner to extract and analyze the sporting statistics stored in the statistics

5   database.

1   17.   The system according to claim 16, wherein the data miner analyzes the sporting

2   statistics to discover patterns and predict future trends.

1   18.   The system according to claim 11, wherein the semantic information is an

2   Extended Markup Language (XML) file.

1   19.   The system according to claim 11, wherein the sporting statistics are saved in a

2   predefined Extended Markup Language (XML) schema.

1   20.   The system according to claim 11, wherein the input data is video.

1   21.   The system according to claim 11, wherein the input data is from a radio

2   frequency (RF) beacon.

1   22.   The system according to claim 11, wherein the input data is textual information.

1   23.   An automatic statistics generation and management system, comprising:

2   a head-end system including a tracking system to receive and process input data

3   of a sporting event to generate tracking information, and a production system to receive

4   and process the tracking information to generate semantic information and geometric

5   information;

6   a statistics generation system including a model manager to receive and access the

7   semantic information and the geometric information, and a statistics generator to receive

8   and process at least one of the semantic information and the geometric information to

9   generate sporting statistics; and

10   a statistics management system having a statistics database to store and manage

11   the sporting statistics, and a data miner to extract and analyze the sporting statistics stored

12   in the statistics database.

1   24.   The system according to claim 23, further including at least one video camera,

2   located at the sporting event, to provide the input data to the head-end system.

1   25.   The system according to claim 23, further including a gateway connected to the

2   statistics management system to support query applications from a user interface.

1   26.   The system according to claim 23, wherein the data miner analyzes the sporting

2   statistics to discover patterns and predict future trends.

1   27.   The system according to claim 23, wherein the input data is video.

1   28.   The system according to claim 23, wherein the input data is from a radio

2   frequency (RF) beacon.

1   29.   The system according to claim 23, wherein the input data is textual information.

1   30.   The system according to claim 23, wherein the sporting statistics are saved in a

2   predefined Extended Markup Language (XML) schema.